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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,589	01/21/2004	Mikko Blomqvist	915-005.092	3015

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EXAMINER

DAGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/762,589	Applicant(s) BLOMQVIST ET AL.	
	Examiner Stephen M. D'Agosta	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-17 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

→ The words "means" and "invention" should be removed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8, 10-13 and 15-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Rydbeck US6,922,567 and further in view of Rankin US 2003/0119530.

As per **claims 1, 12, 15 and 17**, Rydbeck teaches a method for activating a location-based function (title, abstract, figures 2 and 5-9), comprising;

determining at least one item of position data for the function as a condition for starting the function (C1, L45-55 teaches determining position of mobile and C1, L56 to C2, L8 teaches determining if the mobile is near a predetermined item of interest, and if so, a function is executed to send a message/alert to the mobile device user),

using the device in a wireless communication network in which signals are transmitted (figure 2 shows a mobile cell phone within a cellular network), and

monitoring/determining in the device to decide whether positioning of the device is conducted (C7, L62 to C8, L6, which teaches only transmitting location data if, for example, the wireless unit has moved a predetermined distance) **but is silent on** (monitoring) at least one property of the wireless communication network.

The examiner notes that Rydbeck uses GPS signals to determine it's position and only send said position data to the network/location system if/when it's position has changed a predetermined amount. While one skilled understands that Rydbeck's system could also use triangulation, etc. of signals received from the mobile network, he does not teach this.

Rankin teaches using cellular signals to triangulate a mobile device's location:

"...The mobile device further comprises a location detector stage which may take a number of forms, and which is coupled with a store of location data identifying locations (and optionally ancillary data) for the beacons 12, 14, 20. Coarse positioning techniques, such as broadcast cell identity or network triangulation (for example E-OTD), or fine techniques such as GPS, either on the mobile device or via a network operator, can be used to give absolute positioning data. GPRS, for example, offers a continuously-connected mode and also a coarse location fix. This can be used by the mobile device in conjunction with a downloaded "map" of the beacons (which map may be downloaded on entering a new network cell) to only scan for beacon messages when near the known location for the beacon, to within a predetermined range of positional accuracy, and

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otherwise to remain in a power conserving stand-by mode..."
(Para#20).

With further regard to claims 15 and 17, Rydbeck teaches a device and computer program/system (figure 2, #10, #44 and #46) while Rankin teaches that either the mobile device or the network may perform the positioning determination "...Coarse positioning techniques, such as broadcast cell identity or network triangulation (for example E-OTD), or fine techniques such as GPS, either on the mobile device or via a network operator..." (Para #20).

It would have been obvious to one skilled in the art at the time of the invention to modify Rankin, such that (monitoring) at least one property of the wireless communication network, to provide means for the mobile to determine location based on network signals rather than only from GPS signals.

As per **claims 2 and 13**, Rydbeck teaches claim 1/12, wherein the wireless communication network is composed of areas for which an identifier is determined (figure 2 shows different BTS's #50 which inherently have BTS-ID's), **but is silent on** wherein identifiers of the areas are used as a property to be monitored and that the positioning of the device is conducted when the identifier of the area changes.

Rankin teaches using BTS/cell identifiers to determine the position of the mobile device:

"...Coarse positioning techniques, such as broadcast cell identity or network triangulation (for example E-OTD), or fine techniques such as GPS, either on the mobile device or via a network operator..." (Para #20).

It would have been obvious to one skilled in the art at the time of the invention to modify Rankin, such that wherein identifiers of the areas are used as a property to be monitored and that the positioning of the device is conducted when the identifier of the area changes, to provide means for determining location via many ways, including cell or BTS ID's.

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As per **claim 3**, Rydbeck teaches claim 2, wherein on the basis of the position data determined in the function, it is examined whether a position data determined for a function is in the area of the new "area" and that the positioning is conducted if said position data is located in the area of the new "area" (As discussed in claim 1 above, Rydbeck teaches C1, L45-55 teaches determining position of mobile and C1, L56 to C2, L8 teaches determining if the mobile is near a predetermined item of interest, and if so, a function is executed to send a message/alert to the mobile device user. Further C7, L62 to C8, L6, teaches only transmitting location data if, for example, the wireless unit has moved a predetermined distance) **but is silent on** such identifiers are determined in an area of which the position data is located, and that when the identifier changes using identifiers.

Rydbeck teaches sending position data to the network if/when the position has changed a predetermined amount.

Rankin teaches position determination by the mobile using many different means, to include identifying the broadcast cell ID (Para #20). Hence Rydbeck would use identification of cell ID to determine if the position has changed and if said new position will cause a message to be sent.

It would have been obvious to one skilled in the art at the time of the invention to modify Rankin, such that such identifiers are determined in an area of which the position data is located, and that when the identifier changes using identifiers, to provide means for understanding if a location has changed based on updated ID information.

As per **claim 4**, Rydbeck teaches claim 2 wherein the communication network contains base stations (figure 2, #50) **but is silent on** for each of which a cell identifier is determined, and that the cell identifier is used as the identifier of said area.

Rankin teaches position determination by the mobile using many different means, to include identifying the broadcast cell ID (Para #20). Hence Rydbeck would use identification of cell ID to determine if the position has changed and if said new position will cause a message to be sent.

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It would have been obvious to one skilled in the art at the time of the invention to modify Rankin, such that each of which a cell identifier is determined, and that the cell identifier is used as the identifier of said area, to provide means for understanding if a location has changed based on updated ID information

As per **claim 5**, Rydbeck teaches claim 4, **but is silent on** wherein at least one base station is used as a serving base station for the device at a time and that a decision on performing the positioning is made when the serving base station changes.

Rankin teaches position determination by the mobile using many different means, to include identifying the broadcast cell ID (Para #20). Hence Rydbeck would use identification of cell ID to determine that the position has changed due to handoff and that the mobile is now inherently in a new location, which will cause a message to be sent.

It would have been obvious to one skilled in the art at the time of the invention to modify Rankin, such that at least one base station is used as a serving base station for the device at a time and that a decision on performing the positioning is made when the serving base station changes, to provide means for understanding when a BTS change has occurred which inherently means a position change has occurred.

As per **claim 6**, Rydbeck teaches claim 4, **but is silent on** wherein in the device signals of several base stations are listened to and cell identifiers are determined from signals received from the base stations, wherein the decision on performing the positioning is made when a new cell identifier is detected in the received signals.

Rankin teaches position determination by the mobile using many different means, to include identifying the broadcast cell ID (Para #20), eg. the mobile is "listening" to BTS/Cell ID's. Hence Rydbeck would use identification of cell ID to determine that the position has changed (ie. maybe due to handoff) and that the mobile is now inherently in a new location, which will cause a message to be sent.

It would have been obvious to one skilled in the art at the time of the invention to modify Rankin, such that the device signals of several base stations are listened to and

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cell identifiers are determined from signals received from the base stations, wherein the decision on performing the positioning is made when a new cell identifier is detected in the received signals, to provide means for understanding when a BTS change has occurred which inherently means a position change has occurred.

As per **claim 8**, Rydbeck teaches claim 1, **but is silent on** wherein the property subject to said monitoring is timing of a signal of a base station, and that in the device the timing of at least one received base station signal is also measured at intervals, wherein at least information on changes in the timing of the signal is utilized in order to decide whether positioning of the device is conducted.

Rankin teaches using triangulation of received signals to determine location:

"...The mobile device further comprises a location detector stage which may take a number of forms, and which is coupled with a store of location data identifying locations (and optionally ancillary data) for the beacons 12, 14, 20. Coarse positioning techniques, such as broadcast cell identity or network triangulation (for example E-OTD), or fine techniques such as GPS, either on the mobile device or via a network operator, can be used to give absolute positioning data.

It would have been obvious to one skilled in the art at the time of the invention to modify Rankin, such that the property subject to said monitoring is timing of a signal of a base station, and that in the device the timing of at least one received base station signal is also measured at intervals, wherein at least information on changes in the timing of the signal is utilized in order to decide whether positioning of the device is conducted, to provide means for using different ways to determine positioning.

As per **claim 10**, Rydbeck teaches claim 1, wherein on the basis of positioning it is determined whether an activating condition of a function is realized (C1, L45-55 teaches determining position of mobile and C1, L56 to C2, L8 teaches determining if the mobile is near a predetermined item of interest, and if so, a function is executed to send a message/alert to the mobile device user).

As per **claim 11**, Rydbeck teaches claim 1, wherein said function is an act of presenting a message (C1, L45-55 teaches determining position of mobile and C1, L56 to C2, L8 teaches determining if the mobile is near a predetermined item of interest, and if so, a function is executed to send a message/alert to the mobile device user).

As per **claim 16**, Rydbeck teaches claim 15, wherein it is a wireless communication device (figure 2 shows a wireless device).

Claims 7 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Rydbeck US6,922,567 and further in view of Rankin US 2003/0119530.

As per **claim 7**, Rydbeck teaches claim 1 **but is silent on** wherein the property subject to said monitoring is signal strength of a base station, and that in the device the signal strength of at least one received base station is also measured at intervals, wherein at least information on changes in the signal strength is utilized in order to decide whether positioning of the device is conducted.

Loke teaches detecting and monitoring a second BTS's pilot signal strength whereby a handoff is commenced when said second BTS's signal strength is above a certain threshold:

"...Once detected, the phone 3 continues to monitor the signal strength of the neighboring pilot channel. When the signal strength of the neighboring pilot channel exceeds the predetermined threshold, the system 1 initiates the hand off from the cell C1 to the cell C2. At the time this hand off occurs, the phone 3 is tuned to receive simultaneously the signals S1, S2. That is, when the previous connection (signal S1) is broken, the new connection (signal S2) already exists. Although the neighboring frequencies are different, the soft handoff and its advantages are maintained. The user of the phone 3 does not notice the hand off, because the new connection is made before the old connection is broken..." (C13, L34-46)

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Hence one skilled understands that the measuring process spawns a handoff which would be used to trigger a location update since the user has moved from one cell to another.

It would have been obvious to one skilled in the art at the time of the invention to modify Rankin, such that the property subject to said monitoring is signal strength of a base station, and that in the device the signal strength of at least one received base station is also measured at intervals, wherein at least information on changes in the signal strength is utilized in order to decide whether positioning of the device is conducted, to provide means for understanding when a BTS change has occurred which inherently means a position change has occurred.

As per **claim 14**, Rydbeck teaches claim 12, **but is silent on** wherein timing of a signal of a base station is arranged to be used as the monitored property, and that the device comprises measurement means for measuring signal strength of at least one signal received from a base station, wherein at least information on a changing of the signal strength is arranged to be utilized in the determination means for said use in determining whether positioning of the device is conducted.

Rankin teaches using triangulation of received signals to determine location:

"...The mobile device further comprises a location detector stage which may take a number of forms, and which is coupled with a store of location data identifying locations (and optionally ancillary data) for the beacons 12, 14, 20. Coarse positioning techniques, such as broadcast cell identity or network triangulation (for example E-OTD), or fine techniques such as GPS, either on the mobile device or via a network operator, can be used to give absolute positioning data.

The examiner notes that TDOA is also a well known position-based method which uses time differential of arrival of signals, which reads on "timing of a signal of a BTS".

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Loke teaches detecting and monitoring a second BTS's pilot signal strength whereby a handoff is commenced when said second BTS's signal strength is above a certain threshold:

"...Once detected, the phone 3 continues to monitor the signal strength of the neighboring pilot channel. When the signal strength of the neighboring pilot channel exceeds the predetermined threshold, the system 1 initiates the hand off from the cell C1 to the cell C2..." (C13, L34-46)

It would have been obvious to one skilled in the art at the time of the invention to modify Rankin, such that timing of a signal of a base station is arranged to be used as the monitored property, and that the device comprises measurement means for measuring signal strength of at least one signal received from a base station, wherein at least information on a changing of the signal strength is arranged to be utilized in the determination means for said use in determining whether positioning of the device is conducted, to provide means for the various ways of positioning to be used to determine location.

Allowable Subject Matter

Claim 9 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 9 recites novel material – "wherein on the basis of a cell identifier it is determined whether the device is in an area of such a cell to which position data of a function is connected, wherein information on the base station signal strength is used for making a decision on performing the positioning only in such a situation in which the device is in the area of such a cell to which position data of a function is connected".

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Hockley Jr. et al. US 2004/0008138
2. Alanara US 6,061,561
3. Rosen et al. US 6,014,090
4. Watters et al. US 5,982,324
5. Joyce et al. US 6,798,358
6. Gotou et al. US 56,789,102
7. Koss US 6,731,612

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta
Primary Examiner
9-29-2005

